

Advancing to Anarchy

Picture this. Green lasers pointed in a complex matrix across the dimly lit surface. A constant drone of blades toting a fine layer of dust and a faint, sporadic beeping. Shadows providing the outline of a machine, finely intricate and futuristic, while white-coated scientists with delicate tools hover around the apparatus.

These researchers are not making rocket science or holographic technology or instant teleportation. They are developing a quantum computer. While it is capable of hacking modern encryption systems—which protect most private digital data globally—with ease and making calculations exponentially quicker than modern computers, it has a much greater potential. It is fundamentally different, and its great technological innovation will drive society to new extremes. These new quantum computers reinvent the old. *Threaten* the old.

And that's no light matter.

These computers are the epitome of 20th-century science fiction movies, with fully-clad scientists wearing glasses and lab coats stooped over a delicate creation of bleeding-edge technology. Bleeding-edge and dangerous. The melding of physics and computer sciences, of fundamental Nature and sophisticated Man, of power and discipline, of matter and thought. Atomic bombs that left two metropolises devastated in bitter plumes of toxic smoke were simple chains of spontaneous, uncontrolled nuclear reactions, but what if these same nuclear reactions could be understood, minimized, *controlled*? What unearthly powers would such a development harbor?

Such is the prospect of quantum computing: a supervised microcosm of Hiroshima. Harnessing subatomic particles moving near the speed of light, they can measure and manipulate the quantum properties of the particles, allowing for extremely quick computing on a miniature scale.

The novelty of these new computers revolutionizes science itself as well as computing. Imagine Newton's apple falling up or hovering. Imagine magnets separating, water ionizing, matter existing in two places at once. Imagine bitter candy, visible sound, solid gas. Everything unnatural, cropped, crafted, twisted, tainted.

Imagine the sunset, once adorned with the warm glow of a giant fiery ember smoldering into the sky-blue trails of clouds, now become a wasteland of angry lights wanting to transmit a signal, wires that simply do as told. The scent of the evening breeze is gone, to be replaced by the smell of hot electronics; the only thing to hear, anywhere, is the quiet hum of the machinery.

Anything and everything can change. Nature loses. Man loses.

Is this what is to become of civilization? It seems that books—those obsolete collections of paper that are slowly disintegrating into unhappy piles of dust—are the only refuge of knowledge, when the staple medium of digital data becomes highly vulnerable to attack. Life will become the repercussions of technological improvement, the hellfire of our own progress.

It's funny, the way Man progresses. He focused first on the hallmarks of survival: the thrashing, helpless fish with the iridescent blue scales that looks at the sky, contemplating its death by his consumption; the downing of the tree, its sandy bark and tart sap stripped to become the next piling for his shelter; the inner feathers torn from the bloody bodies of birds slaughtered for food as a pillow—for *comfort*. And yet he obtains this all from the generosity of Nature, but without realizing that the situation is as volatile as that of the cod-swarmed waters of the Cape: abundant at first with fish, only to be hunted to near-extinction. And industrial Man certainly has overfished.

In the case of quantum computing, people have become determined enough to exploit Nature at the most fundamental level that is understood, down to mind-boggling sizes. These quantum computers are no more than repackaged physics towards destructive ends. Man simply repeats himself: innovating but stealing from Nature, growing but debasing its provider. With every creation comes an expense in this costly relationship.

Nature is an unlucky street vendor plagued by Man's raids. It's time Man turned himself in.